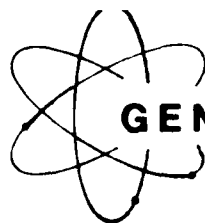**US Army Corps
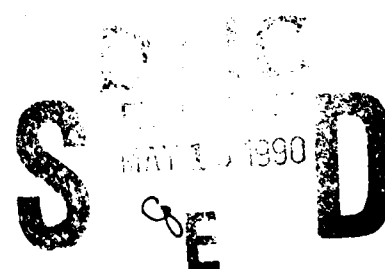of Engineers**

The Hydrologic
Engineering Center

AD-A221 476

GENERALIZED COMPUTER PROGRAM

Interactive Paired-function

Data Input Program

For Flood Damage Data — PIP

User's Manual

January 1986

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INTERACTIVE PAIRED-FUNCTION DATA INPUT PROGRAM
FOR FLOOD DAMAGE DATA

(PIP)

USER'S MANUAL

JANUARY 1986

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INTERACTIVE PAIRED-FUNCTION DATA INPUT PROGRAM
FOR FLOOD DAMAGE DATA
(PIP)

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USER'S MANUAL

INTRODUCTION

The Interactive Paired-function Data Input computer program (PIP) is designed to assist in inserting and storing flood damage paired-function data in the Hydrologic Engineering Center's Data Storage System (DSS). The HECDSS User's Guide and Utility Program Manuals (Hydrologic Engineering Center, Draft, 1983) provide a detailed description of the data storage system. In the past, flood damage analysis data written to a DSS file had to be generated by an HEC program, such as the Structure Inventory for Damage Analysis Program (SID - Hydrologic Engineering Center, 1982) or the Flood Hydrograph Package (HEC-1 - Hydrologic Engineering Center, 1985). By using PIP, a person can now enter data directly from a keyboard into a DSS file. The program is basically a utility to enable performance of analysis as described in the Flood Damage Analysis Package (FDA - Hydrologic Engineering Center, 1986) when basic data are derived from other than HEC programs.

The PIP program is maintained and distributed by the Hydrologic Engineering Center, Water Resources Support Center, U.S. Army Corps of Engineers, 609 Second Street, Davis, California 95616. This agency should be contacted for any questions concerning its use or availability.

GENERAL DESCRIPTION

PIP specifically is designed as an interactive program and should not be run in a batch environment. The program is menu-driven to assist users during execution. The menu concept

is implemented such that at any menu, a user can ask for and receive on-line help instructions.

Data Types. The type of data that PIP processes is called "paired-function" data. A paired-function is an x-y relationship with either (1) one independent variable and one dependent variable, such as an elevation-flow curve, or (2) one independent variable and more than one dependent variable, such as an elevation-damage function where one set of elevations are defined for more than one damage category. In addition, each single variable may be either untransformed or probabilistic. The six (6) paired-functions that may be input using PIP are:

a. Elevation-Damage Data
b. Elevation-Flow Data
c. Exceedance Frequency-Elevation Data
d. Exceedance Frequency-Flow Data
e. Flow-Damage Data
f. Exceedance Frequency-Damage Data

DSS Pathname. All data that are written to or retrieved from a DSS file are identified by a pathname which consists of six distinct pieces of information. The six parts of a DSS pathname are: (1) project name or group (part A), may be a study name or watershed name for the data; (2) location (part B), the control point, damage reach identifier, or station identifier for the data; (3) parameters (part C), PIP automatically generates the data types based on the user's menu responses; (4) unused (part D); (5) data year (part E), the specific point in time to which the data applies; and (6) alternative (part F), the qualifier such as condition or alternative plan name associated with the paired-function data. A user must supply parts A, B and F before being allowed to enter any data.

Input Limitations. Input requirements for PIP are designed
to insure that the user inputs all the necessary data while
adhering to HEC flood damage analysis program limitations.
Limits on data input are given below:

Input Data	Limitation
Number of data points in a paired-function	18
Number of damage categories at a given location for a paired-damage function	50

Hardware and Software Requirements. PIP was developed using
a Harris 500 computer system located at the Hydrologic
Engineering Center, Davis, CA. The program is written in
FORTRAN 77 and is supported on Harris minicomputers and CDC
mainframes. In general, it is compatible with other
major computer systems except that it requires special DSS
software to operate. This DSS software is presently only
available to the U.S. Army Corps of Engineers. Work is underway
to make the DSS compatible with most major computer systems.

Program Language:		FORTRAN 77
Special Library Functions:		DSS Software
Printer Positions:		80
File Assignments:	File5:	Standard input device
	File6:	Standard output device
	File11:	PIP help file
	File12:	PIP menu file
	File13:	PIP data file
	File71:	DSS output file

Specific Capabilities. PIP has three levels of menus to
assist in data input. Fig. 1 describes the relationships

MENU OVERVIEW
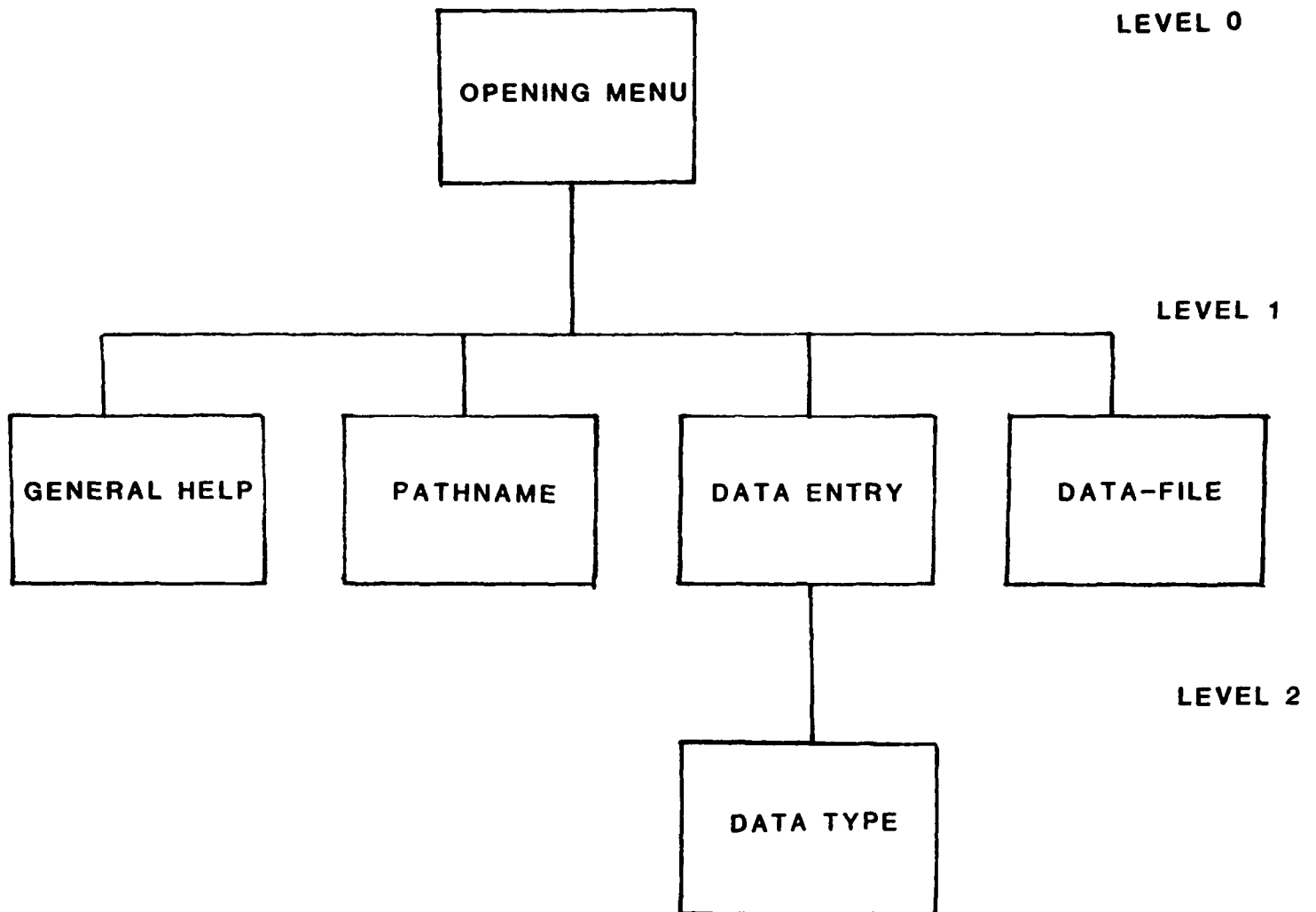
Fig. 1 - Menu Overview

between the opening menu (level 0), the general help, pathname, data entry, data-file menus (level 1), and the data type menu (level 2). One major program design concept is to allow a user to go to any menu from any other menu, even one on a different level. In addition, you may terminate the program from any menu without backtracking to the opening menu.

During an interactive program session, PIP stores all of the user's data on a data-file (file13) before writing to a DSS file (file71). If a computer system should crash during program execution, this file is available for restarting the program from where the user left off before the system crashed. This file may also be created according to the format described in a later section of this document to assist in bulk data transfer.

MENU DESCRIPTIONS

Overview. All user communication with PIP is accomplished through the use of menus. A menu is a listing of the options available to the user at any given time during program execution. Generally, a desired menu option is selected by entering the number associated with the selection, followed by a carriage return. PIP also lets you ask for help at any menu by entering an "H" followed by a carriage return. Any time a user elects to terminate the program by selecting option zero from any menu, PIP will first ask the user if the data entered to this point is to be written to a DSS file. If the answer to this question is yes, the user will be prompted for the name of the DSS file. All of the menus allow the user to terminate the program at any time by selecting option zero (0). In addition, any menu may be selected from any other menu.

Opening Menu. When PIP begins program execution, the
opening menu (Fig. 2) appears on the user's CRT screen or
terminal. The opening menu allows access to the general help
menu, the pathname menu, the data entry menu, and the data-file
menu. The first selection, general help menu, provides the user
with general help instructions. Normally, the user should
always begin by selecting option 2, the pathname menu, because
all data stored in a DSS file must first be defined by a
pathname. If the user selects option 3 before choosing option
2, the pathname menu will automatically be selected. Option 4
should only be selected during a recovery operation or a for
entry of a large quantity of data.


```
          O P E N I N G   M E N U
              0   EXIT PROGRAM
              1   GENERAL HELP MENU
              2   PATHNAME MENU
              3   DATA ENTRY MENU
              4   DATA-FILE MENU


          ENTER ITEM NUMBER OR <H>ELP:
```


Fig. 2 - Opening Menu

General Help Menu. Entering a 1 for the item number during the general help menu (Fig. 3) provides the user the opportunity to alter the help level from the default setting for the novice user to an advanced setting, suppressing the amount of information printed during program execution. If the user enters a one (1), the program writes the following information:

```
HELP LEVELS
    0  ALL DATA ENTRY INSTRUCTIONS DISPLAYED
    1  ALL DATA ENTRY INSTRUCTIONS SUPPRESSED
CURRENT HELP LEVEL IS 0
ENTER SPACE OR NEW HELP LEVEL (0 OR 1):
```

The user has the option of entering a space ( ), a zero (0), or a one (1) followed by the return key. A space leaves the help level at the present setting; a zero sets the help level to display all instructions; and a one suppresses all data entry help instructions. Entering a 2 for general instructions, provides the user with a suggested four step approach to entering data. The selection "SAVE AND EDIT DATA-FILE", describes the use of the intermediate "data-file" created during PIP execution; the selection, DATA-FILE STRUCTURE, describes the different records that comprise the data-file and includes an example data-file.

```
                  G E N E R A L   H E L P   M E N U
                                                 OTHER MENUS
0 EXIT PROGRAM      : 3 SAVE AND EDIT DATAFILE: 5 PATHNAME MENU
1 SET HELP LEVEL    : 4 DATA-FILE STRUCTURE   : 6 DATA ENTRY MENU
2 GENL INSTRUCTIONS:                          : 7 DATA-FILE MENU

ENTER ITEM NUMBER OR <H>ELP:
```

Fig. 3 - General Help Menu

Pathname Menu. The user may enter or modify the project
name and alternative portion of the DSS pathname by selecting
the pathname menu (Fig. 4). This menu must be chosen before the
data entry menu. If this menu is not selected before the data
entry menu, the program informs the user that the project name
must be set before data entry and this menu automatically
appears. Selection 1 sets the project name portion of the DSS
pathname. The project name may be a maximum of fourteen (14)
alphanumeric characters. The second selection (2) sets the
alternative name which must contain no more than twenty four
(24) characters.

               P A T H N A M E   M E N U
                                   OTHER MENUS
          0 EXIT PROGRAM   : 3 GENERAL HELP MENU
          1 SET PROJECT NAME   : 4 DATA ENTRY MENU
          2 SET ALTERNATIVE NAME: 5 DATA-FILE MENU

     ENTER ITEM NUMBER OR <H>ELP:

               Fig. 4 - Pathname Menu

Data Entry Menu. The data entry menu (Fig. 5) allows the user to enter or modify parts of the DSS pathname or to select the type of data that will be entered later. The user may set the location (selection 1) or the optional data year (selection 2). The location may contain a maximum of six (6) characters. The third selection should not be chosen until the required pieces of the pathname (project, alternative, and location) have been set.

```
              D A T A    E N T R Y    M E N U

                                    OTHER MENUS
      0   EXIT PROGRAM        :   4   GENERAL HELP MENU

      1   SET LOCATION        :   5   PATHNAME MENU

      2   SET DATA YEAR       :   6   DATA-FILE MENU

      3   SELECT DATA TYPE    :


   ENTER ITEM NUMBER OR <H>ELP:
```

Fig. 5 - Data Entry Menu

Data Type Menu. The data type menu (Fig. 6) allows the user to select which type of data is being entered into a DSS file. There are six different types of paired-function data allowable at this time. They are: (1) elevation-damage data, (2) elevation-flow data, (3) exceedance frequency-elevation data, (4) exceedance frequency-flow data, (5) flow-damage data and (6) exceedance frequency-damage data. At the present time, the Expected Annual Damage Computation computer program (EAD - Hydrologic Engineering Center, 1984) can only access elevation-damage data, frequency-flow data and elevation-flow data from a DSS file. Selection 7 of this menu provides the user with the ability to display the active pathname that will be used when writing data to the DSS file.

D A T A   T Y P E   M E N U

                                          OTHER MENUS

0   EXIT PROGRAM   : 4   FREQ-FLOW   : 8   GENERAL HELP MENU

1   ELEVATION-DAMAGE : 5   FLOW-DAMAGE   : 9   PATHNAME MENU

2   ELEV-FLOW   : 6   FREQ-DAMAGE   : 10   DATA ENTRY MENU

3   FREQ-ELEV   : 7   DISPLAY PATHNAME: 11   DATA-FILE MENU

ENTER ITEM NUMBER OR <H>ELP:

Fig. 6 - Data Type Menu

Data-File Menu. The data-file menu (Fig. 7) provides the user with an alternative to the keyboard for inputting data to a DSS file. This menu can only be used if a data-file has been previously created. See the data-file description section of this document for details of the data-file structure.


```
                    D A T A - F I L E    M E N U
                                            OTHER MENUS
         O   EXIT PROGRAM               : 3  GENERAL HELP MENU
         1   SET DATA-FILE NAME         : 4  PATHNAME MENU
         2   WRITE DATA-FILE TO DSS-FILE : 5  DATA ENTRY MENU


     ENTER ITEM NUMBER OR <H>ELP:
```


Fig. 7 - Data-File Menu

PROGRAM PROCEDURE

PIP begins execution by writing the opening menu to the user's display device, either a CRT screen or a terminal display. Normal execution of PIP requires the user to first enter a DSS pathname to identify the general data characteristics, i.e. the project name associated with the data (part A) and the alternative name that qualifies the data (part F). After establishing the DSS project name and alternative name, the user selects the data entry menu to set the DSS parameters, location and optional data year. Then the data type may be selected from the data entry menu.

Data Entry. After selecting the type of data to be written to the DSS file, the user will be prompted for the specific data items. For damage data, the user will first be asked for a

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damage category name with a maximum of eight characters. After
the user has input the first data points, separated by a space
or a comma, followed by a carriage return, no other prompts will
appear until the user has entered all the data points. To
signal the end of data input, the user strikes the return key
without any data points, i.e., a blank line followed by a
carriage return.

Data Verification and Editing. PIP then enters the data
verification and edit mode. This is the only chance the user
has to change any values previously input to the program. In
order to edit the data, the user must first display it. Each
data point is assigned a sequential number that is used to
reference the point during the edit mode. There are four
actions allowed during editing: (1) change, (2) delete,
(3) insert, and (4) exit. To change a data point, the user
enters a "C", a comma or a space, the point number, a comma or a
space, and the new values, separated by a comma or a space,
followed by a return. For example, to change point number 3,
the user would enter "C,3,x-value,y-value". To delete a point,
just enter "D,point number". In order to insert a data point,
type "I,point number,x-value,y-value" where point number is the
data point preceding the newly inserted point. To exit the
editor, just type an "X" followed by a return. Upon exiting the
editor, the user will again be given the opportunity to display
and edit the data. Remember, this is the only chance to verify
and modify the data before it is written to the DSS file.

If the user is not entering damage data, PIP returns from
the data type menu to the data entry menu. For damage data, the
user will be asked to enter another damage category name. For
the second and subsequent damage categories, the elevations are
fixed at the same elevations as the first damage category
requiring the user to enter only the damage values. To
terminate data entry of damage date, hit the return key when

prompted for a damage category name, i.e., a null damage category name.

DATA-FILE STRUCTURE

The data entry procedure always results in the creation of a data file. This data file is a temporary file used by PIP to store all input data prior to writing the data to the DSS file. This file is always created with the name "DATAFILE".

In addition, a user may create a data file using a text editor such as COED (Hydrologic Engineering Center, 1985) or through the use of a spreadsheet program such as LOTUS 1-2-3. The data file structure consists of four record types.

Record Type 1 - Pathname Record. The pathname record contains the entire DSS pathname enclosed in quotes, e.g. "/Part A/Part B/Part C//Part E/Part F/". The quotes are required. Valid DSS pathname parameters are:

Part A = project name, maximum 14 characters;

Part B = location, damage reach identifier, etc., maximum 6 characters;

Part C = parameters, must be one of the following 6 variables: elevation-damage, elev-Q, elev-frequency, q-frequency, q-damage, frequency-damage;

Part E = data year associated with data, 4 digit number;

Part F = alternative or qualifier associated with the data, maximum 24 characters.

Record Type 2 - Header Record. The header record contains information describing the amount of data that follows. The first three values are in free format, separated by a space or a comma. The last two values must be enclosed in quotes.

First Value   =   number of coordinates points, i.e., number of elevation points; this value is required;

Second Value =   number of damage categories, if damage data; this value is optional;

Third Value   =   parameter (part C) to appear on the horizontal axis when displaying the data; if the first parameter of the function is to appear on the horizontal axis, this value should be a 1; otherwise, if the second parameter is to appear on the horizontal axis, this value should be a 2;

Fourth Value =   units of the first parameter, may be "UNT" for untransformed or "PROB" for probability;

Fifth Value   =   units of the second parameter, may be "UNT" for untransformed or "PROB" for probability.

Record Type 3 - Label Record. The label record contains the titles describing the data. Each title may contain from one to eight characters and must be enclosed in quotation marks.

Record Type 4 - Data Record. The data record contains the data to be stored in the DSS file. Each line consists of one set of data points, i.e., row or the data matrix. The items are input in free format, separated by a comma or by one or more spaces.

<u>Data-File Example</u>. The following data-file example (Fig. 8) is the elevation-damage data for Cooper Creek base condition in 1980 at damage reach location 11. The paired-function input data consists of five elevation points and four damage categories as follows:

Elevation	Mobl Hom	Apartmts	S.F.Res.	Rescon
502	0	0	0	0
503	0	0	0	0
504	0	0	195	196.8
505	.5	0	305.6	220
506	66.5	0	375.8	237.4

The first record of the data-file describes the pathname for "Cooper Creek," "elevation-damage" function for damage reach location "SID11", the "base" condition in "1980". The second record specifies that the elevation-damage function contains 5 elevation points and 4 damage categories. The third record provides the labels for the elevation and damage categories. The remaining records describe the elevation-damage data.


```
"/COOPER CREEK/SID11/ELEVATION-DAMAGE//1980/BASE/"
5 4 1"UNT ""UNT "
"ELEVTION""MOBL HOM""APARTMTS""S.F.RES.""  RESCON"
502,0,0,0,0
503,0,0,0,0
504,0,0,195,196.8
505,.5,0,305.6,220
506,66.5,0,375.8,237.4
```

Fig. 8 - Data-File

Data-File Usage. The data-file may be used for bulk data
entry and for recovery in case of system failure. In addition,
this file provides a means of editing the data after it has been
stored in the DSS file. To do this, a user must modify any data
in the data-file using COED or some other text editor and then
rerun PIP creating new versions of the data stored in the DSS
file. The DSS system will always replace (i.e., write over) any
data stored in a DSS file if the pathnames are the same. After
this data-file has been modified, the user should execute PIP
and select option four from the opening menu, the data-file
menu.

DATA TYPES

Elevation-Damage Data. An elevation-damage function may
contain a maximum of eighteen (18) coordinate pairs of elevation
and damage values. You may enter a maximum of fifty (50) damage
categories at any one location, for any single plan, for a
particular input data year. The EAD program can only process
eighteen (18) categories but it has the capability to
consolidate categories at execution time. Each damage category
name must contain no more than eight (8) characters. After the
elevations have been input for the first damage category, you
may not input different elevations for subsequent categories at
the same location. The elevation values must be input in
increasing order.

Exceedance Frequency-Elevation Data. The exceedance
frequency-elevation data must contain no more than eighteen (18)
coordinate pairs. The elevation values must be input in
increasing order. The exceedance frequency values must be input
in percent; the values must be in decreasing order, e.g., 10.
for the 10-year exceedance interval event, 1.0 for the 100-year
exceedance interval event.

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Elevation-Flow Data. The elevation-flow data must contain no more than eighteen (18) coordinate pairs. The elevations and the flow values must be input in increasing order.

Exceedance Frequency-Flow Data. The exceedance frequency-flow curve must contain no more than eighteen (18) coordinate pairs. The flow values must be input in increasing order. The exceedance frequency values must be input in percent; the values must be in decreasing order, e.g., 10. for the 10-year exceedance interval event, 1.0 for the 100-year exceedance interval event.

Flow-Damage Data. A flow-damage function may contain a maximum of eighteen (18) coordinate pairs of flows and damage values. A maximum of fifty (50) damage categories may be entered at any one location, for any single plan, for a particular input data year. The EAD program can only process eighteen (18) categories but it has the capability to consolidate categories at execution time. Each damage category name must contain no more than eight (8) characters. After the flows have been input for the first damage category, different flows for subsequent categories may not be input at the same location. The flow values must be input in increasing order.

Exceedance Frequency-Damage Data. An exceedance frequency-damage function may contain a maximum of eighteen (18) coordinate pairs of exceedance frequency and damage values. A maximum of fifty (50) damage categories may be entered at any one location, for any single plan, for a particular input data year. The EAD program can only process eighteen (18) categories but it has the capability to consolidate categories at execution time. Each damage category name must contain no more than eight (8) characters. After the exceedance frequencies have been input for the first damage category, you may not input different exceedance frequencies for subsequent categories at the same

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location. The exceedance frequency values must be input in percent; the values must be in decreasing order, e.g., 10. for the 10-year exceedance interval event, 1.0 for the 100-year exceedance interval event.

PROGRAM TERMINATION

PIP may be terminated from any menu at any time by selecting option zero (0). The user is then asked if the data is to be saved, i.e., stored in a DSS file. If the answer is yes, the user will be prompted for a DSS file name. If the file does not exist, the program will create it. If the file exists, the data will be added to the file, if the pathnames are unique, otherwise, the data will replace existing data on the file.

EXAMPLE

This PIP example demonstrates the storing of three different paired-functions in the DSS. The exceedance frequency-flow data is listed in Table 1; the elevation-flow data is listed in Table 2; and the elevation-damage data is listed in Table 3. The project name for the DSS pathname is "Cooper Cr" and the alternative name is "Base" identifying the data as the base condition. The location or station identifier for the three paired-functions differs. See the tables for the location identifier.

Exceedance Frequency   Flow

Exceedance Frequency	Flow
99.00	515.0
50.00	1675.0
20.00	2579.0
10.00	3236.0
4.00	4140.0
2.00	4790.0
1.00	5430.0
0.20	6889.0
0.01	9219.0

Table 1 - Exceedance Frequency-Flow Data for Location = 3

Elevation   Flow

Elevation	Flow
616.77	190.00
620.17	1000.00
622.04	1800.00
623.01	2650.00
623.50	3250.00
624.05	4100.00
624.38	4700.00
624.73	5400.00
625.36	6900.00
625.42	7100.00

Table 2 - Elevation-Flow Data for Location = 27415.

Elevation	Resident Damage	School Damage
615.00	0.00	0.00
616.00	0.00	0.00
617.00	0.00	0.00
618.0C	0.00	0.00
619.00	0.00	0.00
620.00	0.00	0.00
621.00	0.00	0.00
622.00	0.00	12.20
623.00	0.56	21.22
624.00	66.54	29.32
625.00	228.75	42.54
626.00	367.46	55.32
627.00	505.37	68.54
628.00	619.24	77.05
629.00	716.96	80.83
630.00	785.24	83.22
631.00	821.70	86.44
632.00	851.31	90.44

Table 3 - Elevation-Damage Data for Location = SID11

The example that follows is an actual interactive session with PIP. All of the user's responses are underlined.

PIPX

```
O P E N I N G   M E N U
   0   EXIT PROGRAM
   1   GENERAL HELP MENU
   2   PATHNAME MENU
   3   DATA ENTRY MENU
   4   DATA-FILE MENU
```

ENTER ITEM NUMBER OR <H>ELP:
1

```
            G E N E R A L   H E L P   M E N U
                                                   OTHER MENUS
0 EXIT PROGRAM          :3  SAVE AND EDIT DATAFILE  :  5  PATHNAME MENU
                        :                           :
1 SET HELP LEVEL        :4  DATA-FILE STRUCTURE     :  6  DATA ENTRY MENU
                        :                           :
2 GENERAL INSTRUCTIONS  :                           :  7  DATA-FILE MENU
```

ENTER ITEM NUMBER OR <H>ELP:
1
HELP LEVELS

```
   0   ALL DATA ENTRY INSTRUCTIONS DISPLAYED
   1   ALL DATA ENTRY INSTRUCTIONS SUPPRESSED
```

CURRENT HELP LEVEL IS 0

ENTER SPACE OR NEW HELP LEVEL (0 OR 1):
1
CURRENT HELP LEVEL IS NOW 1

```
            G E N E R A L   H E L P   M E N U
                                                   OTHER MENUS
0 EXIT PROGRAM          :3  SAVE AND EDIT DATAFILE  :  5  PATHNAME MENU
                        :                           :
1 SET HELP LEVEL        :4  DATA-FILE STRUCTURE     :  6  DATA ENTRY MENU
                        :                           :
2 GENERAL INSTRUCTIONS  :                           :  7  DATA-FILE MENU
```

ENTER ITEM NUMBER OR <H>ELP:
5

```
         P A T H N A M E   M E N U
                                      OTHER MENUS
   0   EXIT PROGRAM            :   3   GENERAL HELP MENU
                              :
   1   SET PROJECT NAME        :   4   DATA ENTRY MENU
                              :
   2   SET ALTERNATIVE NAME    :   5   DATA-FILE MENU
```

ENTER ITEM NUMBER OR <H>ELP:
<u>1</u>
ENTER PROJECT NAME (MAXIMUM 14 ~A~ ~TERS):
<u>COOPER CR</u>

ENTER ITEM NUMBER OR <H>ELP:
<u>2</u>
ENTER ALTERNATIVE NAME (MAXIMUM 24 CHARACTERS):
<u>BASE</u>

ENTER ITEM NUMBER OR <H>ELP:
<u>4</u>

        D A T A   E N T R Y   M E N U
                                 OTHER MENUS
   0 EXIT PROGRAM   : 4 GENERAL HELP MENU
                       :
   1 SET LOCATION   : 5 PATHNAME MENU
                       :
   2 SET DATA YEAR   : 6 DATA-FILE MENU
                       :
   3 SELECT DATA TYPE :

ENTER ITEM NUMBER OR <H>ELP:
<u>1</u>
ENTER LOCATION (MAXIMUM 6 CHARACTERS):
3
ENTER ITEM NUMBER OR <H>ELP:
<u>3</u>

                 D A T A   T Y P E   M E N U
                                        OTHER MENUS
   0 EXIT PROGRAM   : 4 FREQ-FLOW   : 8 GENERAL HELP MENU
                    :   :
   1 ELEVATION-DAMAGE : 5 FLOW-DAMAGE   : 9 PATHNAME MENU
                    :   :
   2 ELEV-FLOW   : 6 FREQ-DAMAGE   : 10 DATA ENTRY MENU
                    :   :
   3 FREQ-ELEV   : 7 DISPLAY PATHNAME : 11 DATA-FILE MENU

ENTER ITEM NUMBER OR <H>ELP:
<u>4</u>
ENTER FREQUENCY, FLOW
<u>99.,515.</u>
<u>50.,1675.</u>
<u>20.,2579.</u>
<u>10.,3236.</u>

<u>4.,4140.</u>
<u>2.,4790.</u>
<u>1,5430</u>
<u>.2,6889</u>
<u>.01 9219</u>

DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
<u>Y</u>
DATA DISPLAY

POINT	FREQUENCY	FLOW
1	99.00	515.00
2	50.00	1675.00
3	20.00	2579.00
4	10.00	3236.00
5	4.00	4140.00
6	2.00	4790.00
7	1.00	5430.00
8	0.20	6889.00
9	0.01	9219.00

DO YOU WANT TO EDIT THE DATA? (Y OR N)
<u>N</u>

D A T A   E N T R Y   M E N U

OTHER MENUS

0	EXIT PROGRAM	:	4	GENERAL HELP MENU	
1	SET LOCATION	:	5	PATHNAME MENU	
2	SET DATA YEAR	:	6	DATA-FILE MENU	
3	SELECT DATA TYPE	:			

ENTER ITEM NUMBER OR <H>ELP:
<u>1</u>
ENTER LOCATION (MAXIMUM 6 CHARACTERS):
<u>27415</u>.

ENTER ITEM NUMBER OR <H>ELP:
<u>3</u>

D A T A   T Y P E   M E N U

OTHER MENUS

0	EXIT PROGRAM	:	4	FREQ-FLOW	:	8	GENERAL HELP MENU
1	ELEVATION-DAMAGE	:	5	FLOW-DAMAGE	:	9	PATHNAME MENU
2	ELEV-FLOW	:	6	FREQ-DAMAGE	:	10	DATA ENTRY MENU
3	FREQ-ELEV	:	7	DISPLAY PATHNAME	:	11	DATA-FILE MENU

ENTER ITEM NUMBER OR <H>ELP:
<u>2</u>

```
ENTER ELEVATION, FLOW
616.77,190
620.17,1000
622.04,1800
623.01,2650
623.5,3250
624.05,4100
624.38,4700
625.42

DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y
DATA DISPLAY
POINT          ELEVATION          FLOW
  1              616.77            190.00
  2              620.17           1000.00
  3              622.04           1800.00
  4              623.01           2650.00
  5              623.50           3250.00
  6              624.05           4100.00
  7              624.38           4700.00
  8              625.42              0.00

DO YOU WANT TO EDIT THE DATA? (Y OR N)
Y
YOU MAY (C)HANGE, (D)ELETE, OR (I)NSERT DATA OR E(X)IT AND RETURN TO
DATA DISPLAY

ENTER THE ACTION CODE (C,D,I,X), POINT NO., NEW VALUES
I,7,625.36,6900
OK
C,8,625.42,7100
OK

DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y

DATA DISPLAY
POINT          ELEVATION          FLOW
  1              616.77            190.00
  2              620.17           1000.00
  3              622.04           1800.00
  4              623.01           2650.00
  5              623.50           3250.00
  6              624.05           4100.00
  7              624.38           4700.00
  8              625.42           7100.00
  9              625.42              0.00
DO YOU WANT TO EDIT THE DATA? (Y OR N)
Y
YOU MAY (C)HANGE, (D)ELETE, OR (I)NSERT DATA OR E(X)IT AND RETURN TO
DATA DISPLAY
```

```
ENTER THE ACTION CODE (C,D,I,X), POINT NO., NEW VALUES
D,9
OK
X
DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y
DATA DISPLAY
POINT          ELEVATION          FLOW
   1             616.77             190.00
   2             620.17            1000.00
   3             622.04            1800.00
   4             623.01            2650.00
   5             623.50            3250.00
   6             624.05            4100.00
   7             624.38            4700.00
   8             625.42            7100.00
DO YOU WANT TO EDIT THE DATA? (Y OR N)
Y
YOU MAY (C)HANGE, (D)ELETE, OR (I)NSERT DATA OR E(X)IT AND RETURN TO
DATA DISPLAY

ENTER THE ACTION CODE (C,D,I,X), POINT NO., NEW VALUES
C,7,624.38,6900
OK
X
DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y
DATA DISPLAY
POINT          ELEVATION          FLOW
   1             616.77             190.00
   2             620.17            1000.00
   3             622.04            1800.00
   4             623.01            2650.00
   5             623.50            3250.00
   6             624.05            4100.00
   7             624.38            6900.00
   8             625.42            7100.00

DO YOU WANT TO EDIT THE DATA? (Y OR N)
Y
YOU MAY (C)HANGE, (D)ELETE, OR (I)NSERT DATA OR E(X)IT AND RETURN TO
DATA DISPLAY
ENTER THE ACTION CODE (C,D,I,X), POINT NO., NEW VALUES
I,7,624.73,5400
OK
I,8,625.36,6900
OK
C,7,624.38,4700
OK
X
```

DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y
DATA DISPLAY

POINT	ELEVATION	FLOW
1	616.77	190.00
2	620.17	1000.00
3	622.04	1800.00
4	623.01	2650.00
5	623.50	3250.00
6	624.05	4100.00
7	624.38	4700.00
8	624.73	5400.00
9	625.36	6900.00
10	625.42	7100.00

DO YOU WANT TO EDIT THE DATA? (Y OR N)
N

D A T A   E N T R Y   M E N U

			OTHER MENUS
0	EXIT PROGRAM	:	4 GENERAL HELP MENU
1	SET LOCATION	:	5 PATHNAME MENU
2	SET DATA YEAR	:	6 DATA-FILE MENU
3	SELECT DATA TYPE	:	

ENTER ITEM NUMBER OR <H>ELP:
1
ENTER LOCATION (MAXIMUM 6 CHARACTERS):
SID11

ENTER ITEM NUMBER OR <H>ELP:
2
ENTER INPUT DATA YEAR (MAXIMUM 4 DIGITS):
1980

ENTER ITEM NUMBER OR <H>ELP:
3

D A T A   T Y P E   M E N U

							OTHER MENUS
0	EXIT PROGRAM	:	4	FREQ-FLOW	:	8	GENERAL HELP MENU
1	ELEVATION-DAMAGE	:	5	FLOW-DAMAGE	:	9	PATHNAME MENU
2	ELEV-FLOW	:	6	FREQ-DAMAGE	:	10	DATA ENTRY MENU
3	FREQ-ELEV	:	7	DISPLAY PATHNAME	:	11	DATA-FILE MENU

ENTER ITEM NUMBER OR <H>ELP:
1

```
ENTER DAMAGE CATEGORY NAME (MAXIMUM 8 CHARACTERS):
RESIDENT
ENTER ELEVATION, DAMAGE
615,0
616,0
617,0
618,0
619,0
620,0
621,0
622,0
623,.56
624,66.54
25,228,75
626,367,47
627,505.37
628,619.24
629,716.96
630,785.24
631,821.7
632,851.31

DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y
DATA DISPLAY
DAMAGE CATEGORY = RESIDENT
```

POINT	ELEVATION	DAMAGE
1	615.00	0.00
2	616.00	0.00
3	617.00	0.00
4	618.00	0.00
5	619.00	0.00
6	620.00	0.00
7	621.00	0.00
8	622.00	0.00
9	623.00	0.56
10	624.00	66.54
11	625.00	228.00
12	626.00	367.00
13	627.00	505.37
14	628.00	619.24
15	629.00	716.96
16	630.00	785.24
17	631.00	821.70
18	632.00	851.31

```
DO YOU WANT TO EDIT THE DATA? (Y OR N)
Y
DO YOU WANT TO CHANGE THE DAMAGE CATEGORY NAME? (Y OR N)
N
YOU MAY (C)HANGE, (D)ELETE, OR (I)NSERT DATA OR E(X)IT AND RETURN TO
DATA DISPLAY
```

```
ENTER THE ACTION CODE (C,D,I,X), POINT NO., NEW VALUES
C,11,625,228.75
OK
C,12,626,367.46
OK
X
DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y
DATA DISPLAY
DAMAGE CATEGORY = RESIDENT
POINT          ELEVATION      DAMAGE
    1            615.00           0.00
    2            616.00           0.00
    3            617.00           0.00
    4            618.00           0.00
    5            619.00           0.00
    6            620.00           0.00
    7            621.00           0.00
    8            622.00           0.00
    9            623.00           0.56
   10            624.00          66.54
   11            625.00         228.75
   12            626.00         367.46
   13            627.00         505.37
   14            628.00         619.24
   15            629.00         716.96
   16            630.00         785.24
   17            631.00         821.70
   18            632.00         851.31
DO YOU WANT TO EDIT THE DATA? (Y OR N)
N
ENTER DAMAGE CATEGORY NAME (MAXIMUM 8 CHARACTERS):
SCHOOL
ELEVATION =      615.00
ENTER DAMAGE
0
ELEVATION =      616.00
ENTER DAMAGE
0
ELEVATION =      617.00
ENTER DAMAGE
0
ELEVATION =      618.00
ENTER DAMAGE
0
ELEVATION =      619.00
ENTER DAMAGE
0
ELEVATION =      620.00
ENTER DAMAGE
0
ELEVATION =      621.00
ENTER DAMAGE
0
```

```
ELEVATION =      622.00
ENTER DAMAGE
12.2
ELEVATION =      623.00
ENTER DAMAGE
21.22
ELEVATION =      624.00
ENTER DAMAGE
29.32
ELEVATION =      625.00
ENTER DAMAGE
42.54
ELEVATION =      626.00
ENTER DAMAGE
55.32
ELEVATION =      627.00
ENTER DAMAGE
68.54
ELEVATION =      628.00
ENTER DAMAGE
77.05
ELEVATION =      629.00
ENTER DAMAGE
80.83
ELEVATION =      630.00
ENTER DAMAGE
83.22
ELEVATION =      631.00
ENTER DAMAGE
86.44
ELEVATION =      632.00
ENTER DAMAGE
90.44
DO YOU WANT TO DISPLAY THE DATA? (Y OR N)
(YOU CANNOT EDIT THE DATA WITHOUT DISPLAYING IT)
Y

DATA DISPLAY
DAMAGE CATEGORY = SCHOOL
POINT         ELEVATION        DAMAGE
    1          615.00            0.00
    2          616.00            0.00
    3          617.00            0.00
    4          618.00            0.00
    5          619.00            0.00
    6          620.00            0.00
    7          621.00            0.00
    8          622.00           12.20
    9          623.00           21.22
   10          624.00           29.32
   11          625.00           42.54
   12          626.00           55.32
   13          627.00           68.54
   14          628.00           77.05
```

```
15           629.00          80.83
16           630.00          83.22
17           631.00          86.44
18           632.00          90.44
DO YOU WANT TO EDIT THE DATA? (Y OR N)
N
ENTER DAMAGE CATEGORY NAME (MAXIMUM 8 CHARACTERS):


          D A T A   E N T R Y   M E N U
                              OTHER MENUS
   0   EXIT PROGRAM      :    4   GENERAL HELP MENU
                         :
   1   SET LOCATION      :    5   PATHNAME MENU
                         :
   2   SET DATA YEAR     :    6   DATA-FILE MENU
                         :
   3   SELECT DATA TYPE  :

ENTER ITEM NUMBER OR <H>ELP:
0
DO YOU WANT TO SAVE YOUR DATA? (Y OR N)
Y
ENTER DSS-FILE NAME (MAXIMUM 7 CHARACTERS):
COOPDSS

-----DSS---ZOPEN   EMPTY FILE OPENED    71   0000PIP*COOPDSS

-----DSS---ZWRITE FILE   71, VERS.    1    /COOPER CR/3/FREQ-FLOW///BASE/
-----DSS---ZWRITE FILE   71, VERS.    1
                         /COOPER CR/27415./ELEV-FLOW///BASE/
-----DSS---ZWRITE FILE   71, VERS.    1
                         /COOPER CR/SID11/ELEVATION-DAMAGE//1980/BASE/
            -----DSS---ZCLOSE FILE    71
                         NO. RECORDS=         3
                         FILE SIZE=         936 WORDS,          9 SECTORS
                         PERCENT INACTIVE=  0.00
STOP
```

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